

## University of Dundee

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## On presenting a rich picture for stakeholder dialogue

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**Abstract:** In this paper we describe the design and use of a polyphonic picture book for engaging public sector and industry stakeholders with findings from an academic research project. The project combined interdisciplinary expertise to investigate how UK citizens create and manage online digital identities at three significant life transitions, aiming to deliver social, cultural and technical findings to inform policy-making and service innovation for enhancing digital literacy in online self-representation. The picture book communicated empirical insights through the presentation of multi-perspectival, fictional scenarios about individuals' experiences at the life transitions studied. We deployed the book with our project stakeholders in two workshop settings to explore the efficacy of a novel visual format for fostering stakeholder dialogue around the findings and their transferability. By offering an account of this exploration, the paper aims to contribute methodological insights about using visual storytelling to scaffold interpretative, dialogical contexts of research engagement.

**Keywords:** visual methods; picture book; dialogism; stakeholder engagement

### 1. Introduction

Charting the Digital Lifespan (CDL) is a two-year UK research council-funded project investigating how UK citizens create and manage their digital identities at three significant life transitions across the human lifespan: becoming an adult, becoming a parent for the first time, and retiring from work (<http://www.digitallifespan.ac.uk>). Combining expertise in design, anthropology, cultural studies, and computer science, the project aimed to understand how self-representation in a digital context, or 'digital personhood' (Baym 2015; Lee, Goede and Shryock 2010), is *experienced* at the current time by different generations, and how it is *envisioned* in the near future as individual citizens make sense of their changing lives mediated by new technologies. The overarching project goal was to generate social, cultural and technical insights from this unique lifespan perspective, to inform UK policy-



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making and service innovation for enhancing digital literacy and enabling self-representation online. To pursue this goal, the investigators sought to explore novel methods to disseminate the project's interdisciplinary outputs amongst its stakeholders (in industry, Government and the public sector), thus increasing stakeholder engagement and the potential for real-world impact and a demonstrable contribution to society.

These pursuits within the project were brought together in the design of a picture book (Durrant, et al 2015) that was used as a key resource in two stakeholder workshops. The researchers' primary aim through this book was to capture and communicate a synthesis of the project's research findings that were of interest and relevance to the stakeholders, and to foster discussion between the researchers and stakeholders about the potential value and transferability of the research for making real world impact. An additional methodological aim was to explore design practice in supporting collaboration between investigators to consolidate their interdisciplinary outputs. The book presented qualitative, interdisciplinary insights to stakeholders as a 'rich local picture' about individual citizens' lives.

In this paper we, the CDL researchers, describe the design of the picture book for use in the two stakeholder events. We provide the conceptual grounding of our visual-based approach, and the new storytelling method we devised to produce a picture book for research that draws upon multiple perspectives in the depiction of fictional, character-driven scenarios, to present: stories of participant experience; analytic insights; and design implications. We describe how the work of developing the multi-perspectival scenarios constituted a dialogical, collaborative design process that we found valuable for consolidating analytic insights from our studies. We go on to report feedback from workshop participants and facilitators on the efficacy of the picture book as a resource for communication, dialogue and further ideation. In closing we reflect on the methodological insights gained from this case, intending to contribute to discourses within the DRS community on visual, polyphonic storytelling methods for interdisciplinary research communication and stakeholder dialogue within and beyond the academic context of study.

## **2. Interdisciplinary collaboration for future-oriented research**

The CDL project engaged five partner institutions, combining expertise in different disciplines. Our overall methodology was grounded in phenomenology (McCarthy and Wright 2004; McCarthy and Wright 2015) establishing broad compatibility across the differing approaches adopted by the partners. We focussed on three research populations: young adults (18 to 21 years old), first-time parents (with children under two years), and recent retirees (retiring within the last five years). The interdisciplinary team collectively generated a multi-generational understanding about creating and managing digital personhood from a *lifespan perspective*.

The different partners investigated this subject matter in complementary ways. The humanities-oriented partners (including this paper's authors) employed qualitative methods, including ethnography and experience-centred design (Koskinen, et al 2011; Wright and

McCarthy 2010; McCarthy and Wright 2015). Small sample sizes (up to 36 participants for each population studied) were engaged for participant observation, interviews and focus groups. Alongside this, ‘research through design’ studies were conducted (Blythe 2014; Fallman 2003; Koskinen, et al 2011; Löwgren and Stolterman 2004), deploying design artefacts to generate social, cultural and technical research findings.

### *2.1 Synthesising interdisciplinary outputs*

Content for the picture book was developed from empirical materials generated by two of the project partners, Newcastle University and University of Dundee, with expertise in design and anthropology. Data was synthesised through collective, phenomenological analytic sessions that took place quarterly in the second half of the project. This analysis produced high-level themes that formed the basis for the ‘rich picture’ we would communicate to stakeholders. To properly describe the project findings is beyond the scope of this paper, but the themes we elucidated were: ‘Enablement through Digital’; ‘Digital Social Norms’; and ‘Enacting and Nurturing Relationships’. Each theme provided an interpretative frame for understanding accounts of lives lived online during a significant life transition.

We aimed to design workshop resources that would invite discussion about the ways stakeholders understand how citizens make sense of digital tools and media use – both currently available, and envisioned. Ahead of designing the picture book and other resources, we established criteria about our stakeholders’ known research interests, and invited them to raise topics of concern to address. Before describing how we produced the picture book, we first explain the concepts that informed our approach.

## **3. Picture book design for stakeholder engagement**

Our experience-centred approach to the CDL project was grounded in philosophies of pragmatism and dialogism (McCarthy and Wright 2004; McCarthy and Wright 2015). In turn, the findings offered our stakeholders a qualitative understanding of the subject matter, a set of rich, idiographic accounts of individual lives. We viewed this as potentially complementary to the kinds of research understandings typically encountered by the stakeholders, which are quantitative and mostly survey studies (Ofcom 2015; UK Office for National Statistics 2015). We proposed offering them an alternative view that illuminated detail in the felt life of individual citizens.

### *3.1 Communication through characters and scenarios*

Given our focus, we set out to foster engagement around *individual stories*. There is a tradition within interaction design research of communicating ethnographic insights in the form of narrative vignettes (Orr 1996). There is also a long history of scenario-based communication for practicing user-centred design for human computer interaction (Carroll 2000). Both informed our approach. Scenarios provide concrete stories about user

experience, rather than presenting this in abstract terms and generalisms; scenarios focus on the user's needs, hopes, fears and activities, and let that drive analysis and ideation (ibid). Carroll has demonstrated the value of scenarios – which often leverage visual storytelling – to prompt *envisioning* as well as concretisation. Design fictions offer a more recent creative method for envisioning, fabricating and contextualising near-future possible worlds; storyworlds critically explore speculative design spaces, populated with conceptual design proposals utilising 'diegetic prototypes' (Bleecker 2009; Kirby 2009; Stirling 2009). There are now mature approaches and critical discourses in design research on the use of scenarios to understand and ideate around subjective experience (e.g. Blythe 2014; DiSalvo 2012).

Indeed, scenarios have been critiqued for incorporating personae that may reflect stereotypes and (unwittingly) reproduce generalisms, thus undermining the sense of subjectivity that the scenario approach aims for (Nielsen 2002). Addressing this critique, others have developed *character-driven* scenarios over plot-driven scenarios to retain narrative focus on idiographic, felt life (Cooper 2002; Blythe and Wright 2006). Inspiration has been taken from literary theory and scriptwriting in these endeavours.

Building on this for CDL, our consideration of scenarios for design research was most centrally informed, after Wright and McCarthy (2005) and Blythe and Wright (2006), by a dialogical reading of the polyphonic novel; this is a literary genre expressing human experience in terms of *multivoicedness* and *characters in dialogue*. Wright and McCarthy (2005) appropriate Bakhtin's analysis of the polyphonic novel in relation to felt life to offer useful insight for guiding researcher engagement with accounts of experience; this is based on the Bakhtinian concept of the *unfinalisability* of experience: "the novel has the potential to be a multi-voiced dialogic – a useful stance for expressing the open and continually changing and developing nature of experience with technology" (ibid, p.14). What is emphasised here, and taken on in our design process, is the function of character perspectives within a narrative to express the potential for dialogue about a complex subject matter or state of being.

### *3.2 Visual methods of communication and ideation*

We now describe the conceptual grounding of our visual-based approach. Visual storytelling is often at the core of scenario design methods (Buxton 2007; Moggridge 2007). The CDL studies collected large amounts of visual data, mostly relating to the expression of identity and selfhood through social media use; photographic and pictorial expression was found to be of central significance in our studies of digital personhood, as we report elsewhere (Trujillo Pisanty, et al 2014). It therefore seemed fitting to leverage visual communication in our scenarios.

The picture book format has traditionally been associated with children's storytelling (Nikolajeva and Scott 2000). McCloud (1993) explores the medium of sequential art (that combines images and prose), offering insight into the potential of picture books to communicate to adult audiences and their wide application as a creative form of expression

(see also Eisner, 2008). Picture books leveraging sequential art have been used for interaction design research communication and argumentation (Durrant, et al 2011; Rowland, et al 2010), and the value of the pictorial for disseminating research about human-computer interaction is increasingly recognised (Blevis, Hauser, and Odom 2015). Our decision to develop scenarios in a picture book format for engaging stakeholder dialogue about our research aims to contribute to this growing body of work.

### 3.3 A picture book for our project

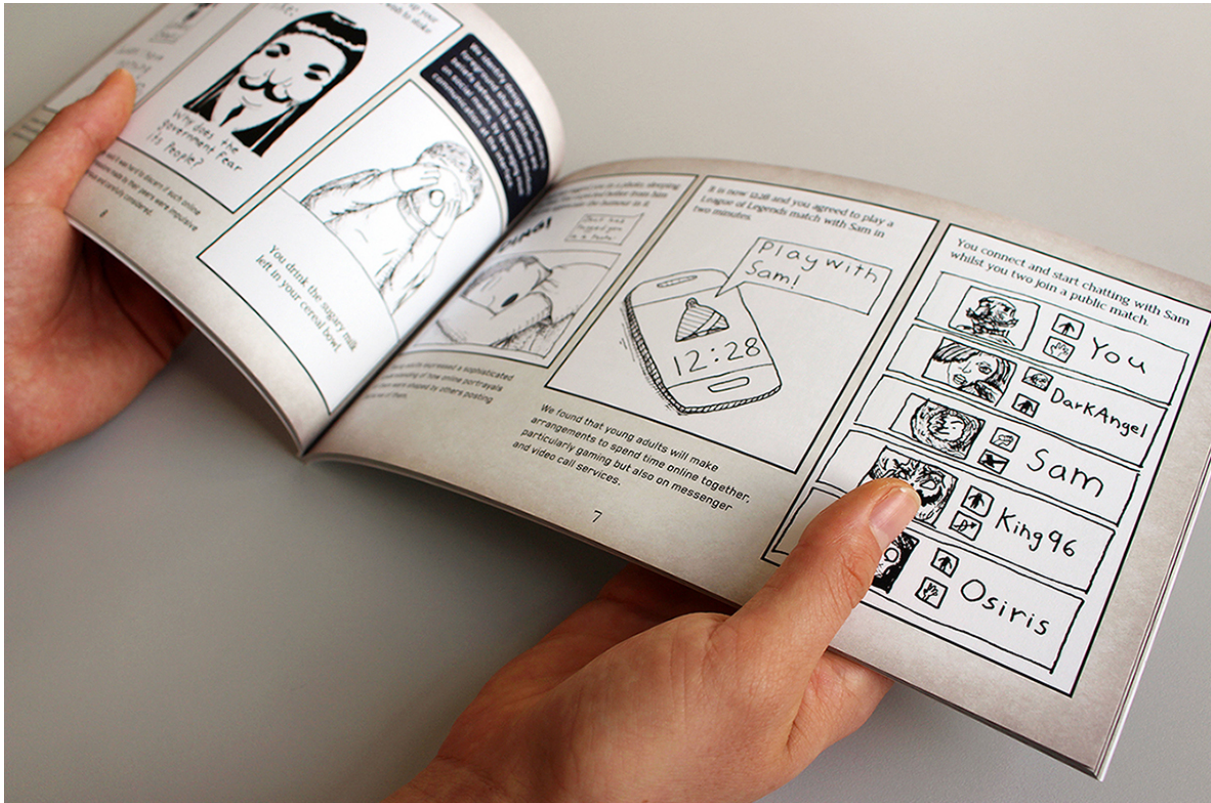


Figure 1 The CDL Picture Book, produced in digital copy plus as a soft-bound book, to afford personal reading and reference in the context of round-table discussion and personal engagement.

The CDL Picture Book captures collective, interdisciplinary insights from the project, depicted in the form of *fictional*, character-driven scenarios about individuals' experiences at the three life transitions we studied (Figure 1). Circulated to individual stakeholders in both digital form and as a soft-bound book, the resource served to afford personal reading and reference in both the context of workshop reflection and discussion, and afterwards.

The book contains three scenarios, each about one of the life transitions, and includes an Introduction for the reader. The narratives were collaboratively developed taking inspiration from individual participant accounts that (i) resonated with our analytic themes and (ii) saliently featured details mapping to our synthesised findings. Some narrative details in the scenarios' design reflected actual content from the participants' accounts. The scenarios were populated with *fictional characters* that, rather than being seen as



archetypes or personas (in the traditional sense), reflected instead the unique individuals we met in our studies, and their expressed understandings, hopes and fears about digital personhood in all its complexity. Narrative development was further informed by the interests of stakeholders that we identified, directing a *projective distillation* of findings for inclusion. The scenario development process required focused, face-to-face work by researchers who had a deep, expert understanding of the research being represented, over the course of two daylong sessions plus numerous email exchanges. In this sense, whilst fictional, the scenarios were based on and grounded in empirical data – a strategy previously used by other researchers employing narrative approaches (e.g. Blythe 2014).

### 3.4 Three perspectives on the research

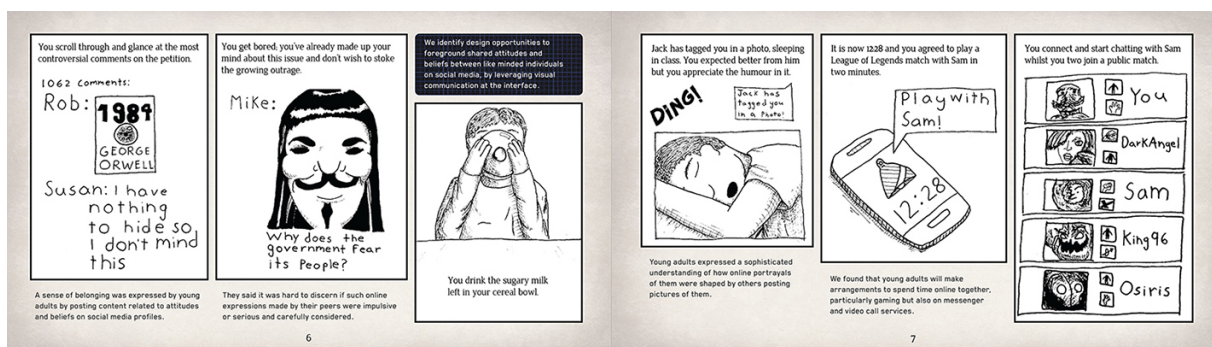


Figure 2a CDL Picture Book spread, showing the three perspectives on the research (pages 6-7).

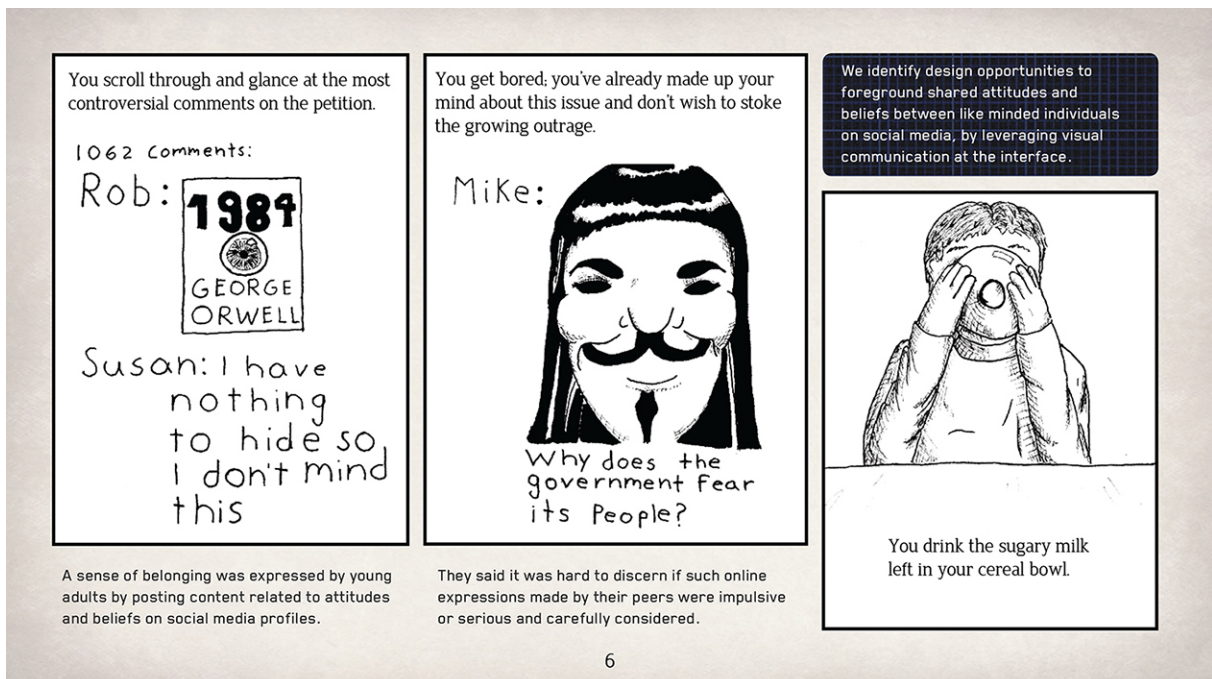
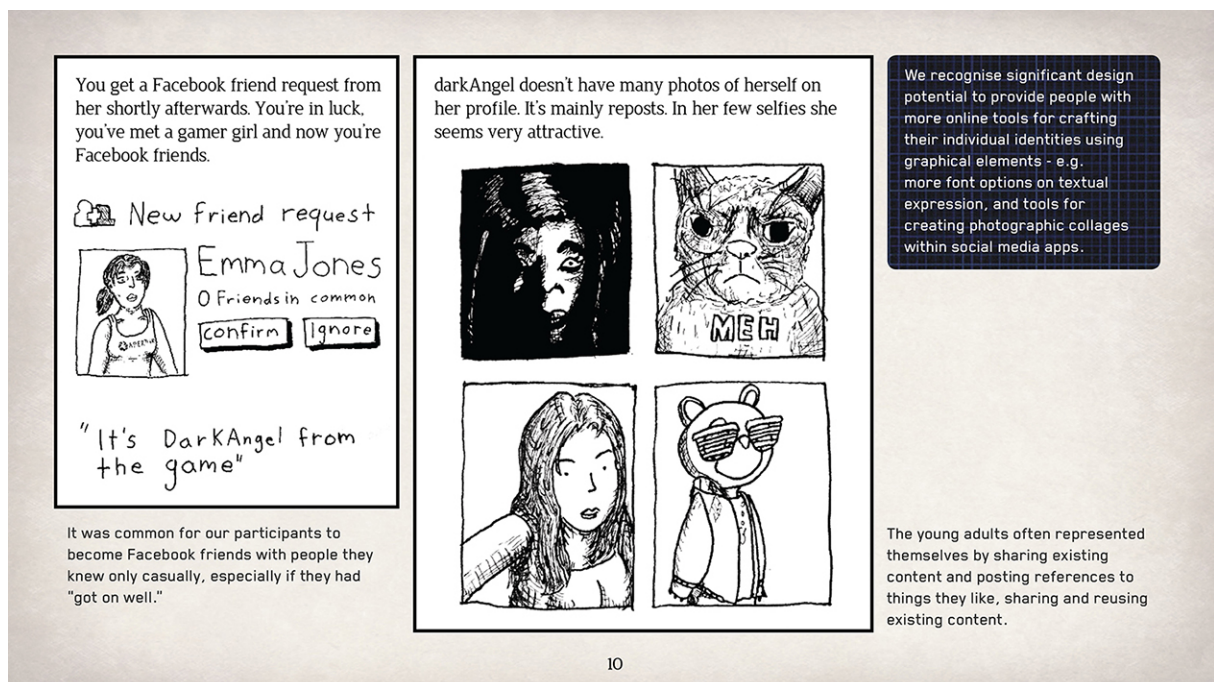


Figure 2b CDL Picture Book detail, showing the three perspectives on the research (page 6).

We devised a structure for the scenarios that is arguably innovative, and builds upon previous explorations of the picture book format (Durrant, et al 2011). Directly inspired by the concept of the polyphonic novel and multiple authorial voices (Wright and McCarthy, 2005), we set out to configure three perspectives on the scenario for the reader to engage with: (A) stories of participant experience; (B) analytic insights; and (C) strategic design implications (Figure 2a and 2b). These three perspectives – or authorial voices – are presented in the graphical layout as visually distinct from each other (Figure 3). The stories of experience (A) are captured in sequential art form, through hand-drawn illustrations accompanied by prose descriptions of narrative events. Taking further inspiration from design fiction approaches (Bleecker 2009; Stirling 2009), the stories incorporate fictional, near future products and services, devised to spark critical dialogue on potential design directions and to motivate a generative process of ideation around the accounts of experience (see also Figure 6). A series of empirical research insights from our collective analysis (B) are captured as prose statements in a distinguishing typeface; each statement is spatially juxtaposed with the corresponding narrative event that was inspired by it. These insights reflect social and cultural understandings about the subject. A number of implications for service and system design are presented in rectangular, round-edged boxes, juxtaposed with the corresponding narrative event (Figure 3).



*Figure 3 CDL Picture Book detail, taken from Young Adults scenario (page 10).*

Our intention through the introduction of the multiple authorial voices was to offer an engaging means (through (A)) to contextualise the research insights (B) and offer directions for their real-world applicability and transferability (through (C)), (Figure 3). Juxtaposing the voices enabled us to convey – in a relatively brief form – the idiographic nuance and



complexity of experience that was perceived to be a core value of our findings, whilst delineating 'fact' from fiction (Figure 4).

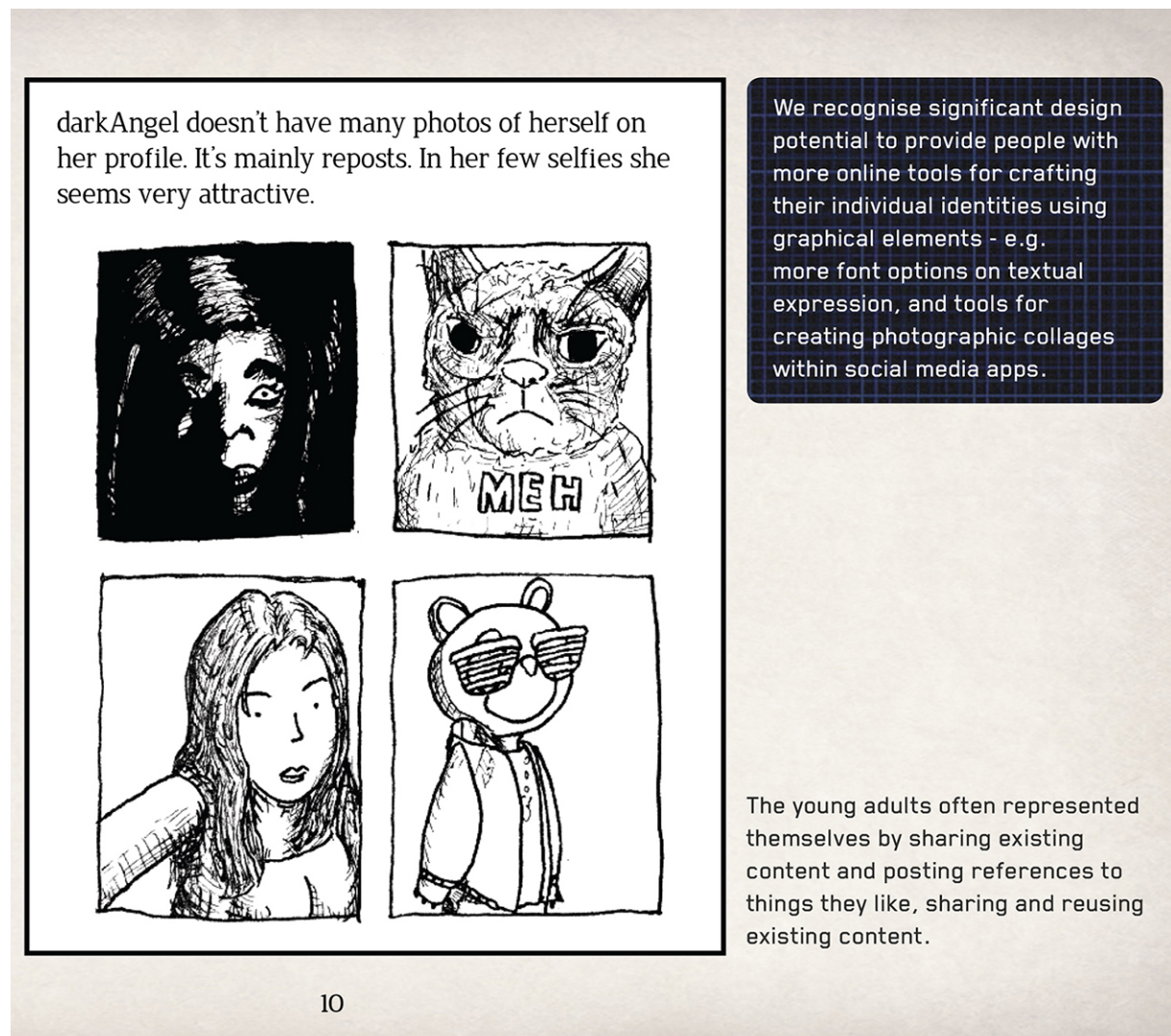



Figure 4 Another CDL Picture Book detail from page 10, showing the multiple authorial threads.

For example, in an early part of the Young Adults scenario, the depicted behaviour of the character named darkAngel reflects behaviour reported by a number of research participants across the two data sets (Figure 4). However, as the narrative in the fictional scenario develops, the behaviour of the darkAngel character deviates from that voiced by - and observed of - the research participants; darkAngel becomes the *personification* of many of the participants' *fears* about *their* manipulation by others in the course of online interactions, via the construction and expression of false or alternative identities (Figure 5).

YA



YOUNG ADULTS

**In the Scenario:**


The young adult becomes friends with Gamer Girl darkAngel/Emma and heads off to hopefully meet her in person.

**Afterwards:**

The young adult is disappointed – he doesn't meet Emma at the party. And when he returns home, someone has broken into his flat and taken his iPad. He thinks "Maybe I shouldn't have checked in at the party using Facebook. Emma could see I was there, but so could everyone else."

**Issues Raised:**

- Are your online friends who they say they are? Wariness when getting to know people, what are danger signals or pointers to inconsistencies in the online world?
- How much information is too much? How can young adults protect themselves when the digital social norm is to share and respond?



YA

Figure 5 Dilemma Card accompanying Young Adults scenario in CDL Picture Book, intended to foster alternative readings of the scenarios and provoke new reflection on the research.

A key function of our multi-voiced picture book design was to open up stakeholder dialogue and sense making on our research rather than simply present results. To enhance this function, we additionally devised three Dilemma Cards (A5-sized and connoting playing cards in form) – one corresponding to each scenario – that presented additional discursive content (using the multiple threads of (A), (B), and (C)) to extend each scenario with a provocative narrative plot twist (Figure 5).

#### **4. Stakeholder workshop design and analysis**

We now describe using the picture book (and cards) within the stakeholder workshops. A stakeholder workshop was planned from the project outset; and three of the identified stakeholders had sat on a steering group panel in an advisory capacity across the project timeframe. The stakeholders invited to the planned workshop held interests and expertise ranging across crime, personal security, defence, taxation, personal data, media and design, and had senior roles in Government, industry or the public sector. This workshop was primarily positioned as an event for disseminating key project findings; however it was also seen as a generative event through the delivery of a report afterwards that synthesised workshop discussion and incorporated the additional input of the stakeholders in response to the presented findings. The objective was therefore to create a discursive (dialogical) context for discussing new empirical materials of direct interest and relevance to those in a position to impact and shape services to UK citizens. The second workshop, whilst not included in the original project plan, was opportunistically developed to extend discussion with one of the stakeholder organisations.

The workshop agenda was structured by appropriating HM Government's Futures Toolkit 'Seven Questions' method (Cabinet Office and GO-Science 2014), supported by the picture book. The agenda was refined through consultation with Government and public sector advisors. Critically, we limited the workshop to half a day, as the stakeholders were heavily time-constrained. We also focussed explicitly on connections between the academic findings and practical areas of known relevance for stakeholders, to ensure that the workshop delivered satisfactory outcomes for them. Following a pilot, two workshop events were then run: the first with a range of participants from Government, public sector and industry; the second with an independent public sector organisation that had a direct interest in the responsible use of UK citizens' personal data.

Stakeholders were given details of the intended aims and outcomes of each workshop, and invited to shape these to fit their own objectives more closely; they provided ethical consent to participate in our methodological research on the workshop resources; their contact details were kept confidential. They received digital copies of the picture book in advance, but it was not assumed that they would necessarily have time to read it (note that the dilemma cards were *not* presented in advance).

#### **4.1 Workshop structure**

The workshop was structured to maximise interaction between its participants. Following introductions, the stakeholders were split up into three equal-sized round-table groups. Each group was introduced to one picture book scenario (Young Adults, New Parents, Recent Retirees) by a facilitator and was given an opportunity to read it individually, before engaging in a group discussion. Following discussion and a break, participants were invited to move on to the next table, and engage with the next scenario. This was repeated twice so that all participants discussed all scenarios.

Stakeholders were asked to address the following questions from the Futures Toolkit (Cabinet Office & GO-Science 2014) about each scenario, through facilitated group discussion:

1. What would you identify as critical issues for the future related to this scenario? (5 minutes)
2. If things went wrong what factors would you worry about? – What are the risks you identify for your organisation? (6 minutes)
3. Looking at your organisation, how might processes need to be changed to bring about desired outcome(s), maximising benefits and minimising risks? (7 minutes)

Additional questions that could be addressed if there was sufficient time were:

4. If all constraints were removed and you could direct what is done, what more would you wish to include?
5. If things went well, what's a desirable outcome?
6. What are the benefits you identify in this scenario for your own organisation?

Stakeholders were then introduced to the dilemma card for their scenario, and given time to read it, before being asked Question 2 (above) again. Once the groups had discussed the scenarios, everyone came together to summarise the findings and share the discussion points and knowledge generated.

In Workshop Two, our host at the organisation led the final discussion. This focussed explicitly on how to apply knowledge generated during the workshop to that organisation's practice for engagement with the public and with policymakers. Chatham House Rule (<http://tinyurl.com/oqdvs3s>) was observed at both workshops. Discussions were documented in note form on flipchart paper.

A paper-based evaluation was then carried out; each participant was invited to respond to the following questions:

7. How did you use the picture book as a resource for supporting discussion with your colleagues about the subject matter of the workshop?

8. How did the character-driven scenarios and accompanying research insights, captured in the book, prompt discussion of potential policy directions and service design opportunities?
9. What are your thoughts on how this picture book could be used to communicate research insights within your organisation?
10. What do you see as the benefits and barriers to using this picture book approach as a resource within your organisation?

Discussions at the first workshop were captured and subsequently distilled in a 'Stakeholders' Report', circulated to attending stakeholders after the event.

#### *4.2 Analysis of picture book use*

The first, second and third authors conducted a phenomenological analysis of the following data: responses to the paper-based evaluation (constituting responses from 17 workshop participants (P) and three facilitators (F)); participant observation by the first and second authors; and autoethnographic reflection on the book in use. Our findings are organised around a set of themes. These broadly map to the evaluation questions asked, and focus on participants' practical sense making around their workshop experiences.

### **5. Findings: Picture book use in the stakeholder workshop**

#### *5.1 Grounding and opening up discussion*

The picture book was predominantly used in the round-table discussions "to understand the scenarios under discussion, then as a reference for particular talking points" (P2). The book was found to provide "a good starting point for discussion" (Facilitator 1), with the scenarios working to contextualise the presented research: "it was useful as it instantly contextualised things and made it easier to engage with the questions and aims of the debate" (P7); "It was a good way to begin a discussion and make sure everyone was talking about the same thing – gave context" (P11). "The format and structure introduced the range of concerns very effectively" (P15); "It provided specific examples as a basis for discussion, which is more helpful than starting from more general impression of people's behaviour" (P13). The book was "referenced throughout the session to identify key areas of discussion" (P14); it "kept conversation grounded as everyone had examples to refer to in discussion" (P5). It also helped *open out* discussion: "The book provided a useful prompt and encouraged further consideration of issues beyond those directly referred to within it" (P6).

#### *5.2 From the abstract to the particular: making real*

The printed form factor worked well at the tables: "The tangibility and the narrative were powerful cues for both personal reflection on the scenarios and discussion" (P15). Participants made a number of comments about the interleaving of project research insights with fictional characters and narratives. In graphic design terms, "the monotone style worked well - its starkness and lack of colour invited the reader to think from the



perspective of those pictured” (P16). Participants described how the “link between the scenarios and the findings in the ‘call out’ boxes worked well to make the research insights seem clearer and more real” (P4).

The book and accompanying dilemma cards showed “examples of things that can happen in practice, to stop conversation being too abstract” between the participating group members (P1); “It enabled us to consider high level, potentially abstract concepts through the lens of ‘real life scenarios’” (P3). The book served to help the participants navigate between the abstract and the particular: “I think it was a useful referral tool, as it allowed you to relate a concept which you are trying to discuss at quite an abstract level to a more ‘real-life’ situation” (P7); it provided “specific names and stories, with which to discuss hypothetical situations” (P5). Anchoring the character-driven narratives in research data was also found to give the material that was presented credibility with participants, whilst service design insights were used as “hooks” (Facilitator 2) for discussion throughout the scenarios.

Moreover, the material presented in the picture book generated discussions on the heterogeneity of UK citizens. Participants identified fresh opportunities to understand the breadth of views on individual citizen experience, and suggested that they could engage with these individuals through the resource.

### *5.3 Communicating complex issues in an understandable way*

The workshop structure was found to give the Workshop Two participants time to reflect on issues relating to the responsible use of UK citizens’ personal data, which was their core focus as an organisation. Many participants identified the book’s communicative potential within their organisation, as offering “a good discussion prompt” to foster internal dialogue (P3, P6), and “to convey issues” (P12); “We could use specific examples like this to focus policy discussions around privacy notices, consent, etcetera” (P13); “linked to future guidance, this could form part of an internal learning session” (P14). The approach seemed transferrable and had capacity to open up further dialogue: “We could produce a version which supplemented your scenarios with issues from our own strategic concerns in this domain, to embed the discussions in a more directly relevant place, but at the same great level of insight” (P15).

The way in which the book content and format served to offer a projected distillation of insight was appreciated: “It is refreshing and helpful to have a different means of communicating findings which is *brief* – rather than a long discussion paper; we see a lot of the more traditional, lengthy and discursive papers in the day job, and this helps to make you consider things from the perspective of the public” (P4); “A quick and easy way to impart the information contained within” (P10).

From a facilitator perspective, the book “made the research concepts easy for the stakeholders to grasp, and allowed us to really maximise the time we had with them in one afternoon – we could jump right in, and talk about issues” (F2), as it “invites engagement” (F3).

The efficacy of the resource was also considered for outward-facing dialogue. Participants also saw opportunities to integrate the different character views into advisory materials that they produce, aimed at policymakers, corporations and citizens: “thinking about how we present advice in an engaging way – again making helpful and practical points available to different audiences” (P4); “We could also use this approach more in external communications and guidance” (P13); for “communicating to the public complex matters in an understandable way”; “simple, clear, visual” (P12); “people relate to visual, graphical representation well” (P6).

#### 5.4 Concerns around scope and representativeness

There were, however, concerns voiced about the scenarios for conceptually limiting the discussion space. One participant was concerned that the book was “fairly limited with three stories” (P11). Another found the scenario constraining the “scope to expand further to explain what people can do to remedy the issue or how to prevent it happening in the first place” (P14); it was felt that the diegetic space (story world) could have afforded more along these lines. And another participant was concerned “that in describing a specific scenario you may stifle discussion on an issue that may be useful but is not mentioned”. Other perspectives ameliorated such issues. One participant relayed: “it seemed narrow that the scenarios all portrayed lone individuals in circumstances of some anxiety or risk, however in practice this allowed the discussion to include critiques of the scenarios, which was very useful” (P15).

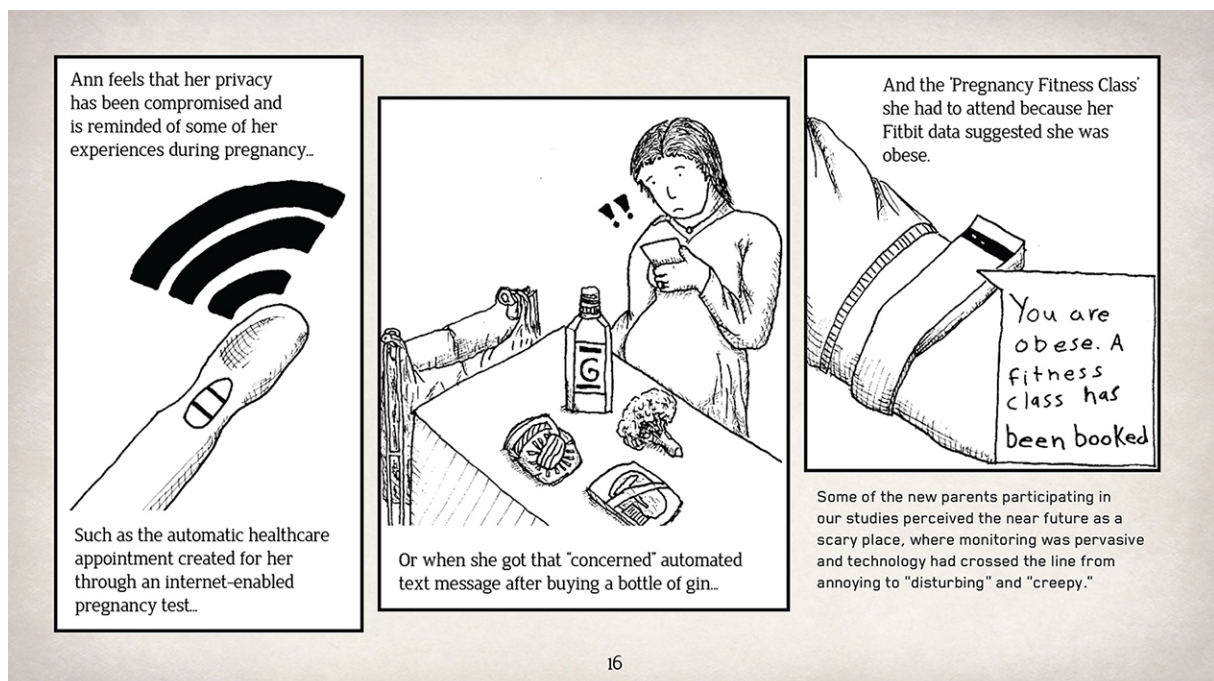


Figure 6 CDL Picture Book: an extract from the New Parents scenario that incorporates fictional products and services within the narrative events (page 16).

There were equally differing levels of comfort around the role of fictitious elements: “I found it confusing when *completely* fictitious examples were used in the scenarios, for example, a pregnancy text that set up an appointment with a GP [general practitioner] (Figure 6). It would have been easier to understand if they were real life anonymised, but likely or common scenarios for that group” (P19). An interesting criticism here is on a perceived lack of clarity about the relationship between empirical evidence and fiction in the narrative threads. This was caused by our inclusion, in places, of fictitious, near-future products and services within the story world. Feedback from this workshop participant revealed that such narrative components could be ‘confusing’ if not properly introduced.

### *5.5 General reflections on the resource*

Building on the last point, the facilitators reflected that the picture book needed a sufficient presentational context to be adequately ‘read’ and understood. As F2 reflected, “I feel that to hand it over to others it might need a bit of framing”. The facilitator went on to point to the necessity of there being a dialogic process between the researchers, facilitators and the participants around the presentation of the resource: “I think without the workshop part of it, people might have difficulty walking away with the key points of the CDL project” (F2).

Other practical concerns were voiced, about the picture book production. Some considered the investment of effort in production could be justified if it delivered on value: “It could be time-consuming but worthwhile I think” (P1); “It involves more time and effort to prepare, as compared to simply presenting facts and figures; it actually requires very detailed research, to construct realistic examples, but is very powerful if done well” (P13). Our own concern in reflecting on the book production is that the work of creating its content and then providing the framing for its presentation necessitated, in the workshops conducted to date, significant input and representation by the research team members who were also the book’s *designers* – as experts on the book’s content and function. The extent to which this picture book would work in a stakeholder workshop without the presence of at least one of the researchers involved in creating it is an open question to explore in future workshops.

## **6. Discussion**

In this paper, we offer a case of using picture books as a resource for design. Specifically, we describe putting some of the polyphonic literary devices highlighted by Wright and McCarthy (2005) into practice in the design of a visual storytelling resource for stakeholder dialogue around research findings. We now reflect upon the picture book in use in the stakeholder workshop context.

First, we revisit the purpose we wanted the book to serve in the workshop, to help us reflect on its usefulness and potential appropriation by others (e.g. stakeholders, design researchers). In its design, we oriented to it as a resource for enabling sense making and productive dialogue around a set of research insights.

Based on our workshop feedback, the book proved efficacious in scaffolding this dialogical space for stakeholder interaction. Reflecting more deeply on why, we suggest that our research insights would always have to be grounded by the stakeholders themselves *within their own practices* if they were to be made of sense to them and be usable. There was little utility in presenting definitive statements about the research outputs. Consequently, we saw the findings depicted in the book as constituting dialogic elements of a research space that remained open for interpretation.

Arguably, the character-driven scenarios also helped create this interpretative frame. We return to Wright and McCarthy's reading of Bakhtin (2005) to elaborate. In a Bakhtinian analysis of the polyphonic genre:

"We see the world of the novel from multiple perspectives of different characters with different value systems, and there is seldom one best way forward... Rather it is the relations between these value systems that drive the novel on. ... Furthermore, characters' actions are not causally determined by plot, a creative response can be drawn out of them without destroying the coherence of the story." (Wright and McCarthy 2005, p.15)

In the Young Adults scenario, part of which is depicted in this paper (Figures 1 – 5), the darkAngel character is positioned in empathic relation with the CDL research participants whose accounts are represented; this is captured on page 10 (Figure 4) in the juxtaposition of the pictorial depicting darkAngel's gaming profile with the authorial voice of the researchers talking about research findings (B). darkAngel presents herself to character Matt (the young adult in this story) through different identities, at different events within the narrative thread, (for example, as Emma through a social media friend request (Figure 4)). It is the relationship dynamics between Matt and darkAngel/ Emma that were intended to invite stakeholder engagement because it is the concerns such as 'wariness when getting to know people online' that were deemed of core interest for discussion and ideation in the workshop context (Figure 5). Moreover, we see here how the characters in the stories are actually operating, not just with each other, but in further dialogue with the *other authorial voices* of the picture book.

Connecting this example to methodological discourse: another criticism of scenarios for design research, aside from their historic use of stereotyped personae (Nielsen 2002), is that they are often seen to close down interpretation by their readers about a design space of possibility by presenting a 'unitary vision' of a technological future (Gaver 2011). Indeed we received some critical feedback (above) about how the stories in the CDL picture book constrained thinking to the represented subjects. Arguably, however, the unique, multi-perspectival format of this picture book – or polyphonic picture book as it might be dubbed – and the nature of its content, were found, by most at the workshops, to open up the dialogic imagination of workshop participants around the presentation of research insights and the possible design spaces that they suggest for consideration.

Our researcher positioning within the picture book design process and the workshop event is also significant to reflect on methodologically. Thinking in terms of a dialogical exchange, we, as a research team, collected new research data and analytic insight through the book design process and the workshop discussions. The process of synthesising (and distilling) collective insights from a complex, interdisciplinary project into something relatively brief, pictorial, and accessible required significant collaborative dialogue between the disciplinary partners in efforts to engage, analyse, and ideate around alternative perspectives on the project and its outputs. On reflection, developing and editing the book was found to be enriching for further analysing the CDL data as a collective process, for example, deciding on research highlights and accommodating changes to story and character features to hone representations. Also, we recognise that our insight as this picture book's *designers* contributed significantly to the running of the two workshops (although round table group activities were in three cases facilitated by others). These are important considerations for the transferability of the method. We are currently using the picture book in further stakeholder engagements with different workshop structures, framing devices, and reading contexts, to deepen our understanding of its effectiveness and limitations.

In closing, we reiterate our intended contribution with this paper to offer a case study account of the design and use of a novel, polyphonic picture book format to open up stakeholder dialogue about the qualitative findings from an interdisciplinary research project. Reflecting on this process, we have suggested how aspects of the book's format, content, and context of use offer methodological insights to the DRS community about using visual storytelling techniques with particular dialogical features, for scaffolding interpretative contexts of research engagement.

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